

§Appl. No. 09/856,044
Amdt. dated August 11, 2004
Reply to Office Action of, May 13, 2004

Listing of Claims:

Please **amend** the claims as follows:

Claim 1 (Previously Presented) A method of identifying one or more unknown microorganisms in a sample comprising:
searching a sequence database for a plurality of intact, undigested proteins that are predicted to have the molecular weights of proteins in a mass spectrum of a sample, whereby said one or more unknown microorganisms are identified,
wherein said sample comprises a plurality of proteins from one or more unknown microorganisms, and said database is searched for more than one different protein.

Claim 2 (Original) A method of claim 1, wherein the sequence database is a protein sequence database.

Claim 3 (Original) A method of claim 1, wherein the sequence database is a nucleotide sequence database.

Claim 4 (Original) A method of claim 1, wherein the mass spectrometry data is MALDI-TOF data.

Claim 5 (Original) A method of claim 1, wherein the mass spectrometry data is obtained by electrospray on a time-of-flight, quadrupole, or ion trap mass analyzer.

Claim 6 (Cancelled)

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Claim 7 (Original) A method of claim 1, further comprising:
performing a mass spectral analysis on a sample comprising one or more microorganisms.

Claim 8 (Original) A method of claim 1, further comprising:
identifying molecular weights of proteins in a mass spectrum of said sample.

Claim 9 (Original) A method of claim 1, wherein said sample comprises at least two
different species of microorganisms.

Claim 10 (Original) A method of claim 1, wherein the sequence database is the
NCBI/SwissProt/EMBL database.

Claim 11 (Original) A method of claim 1, further comprising chemical or enzymatic
digestion of a protein in said sample.

Claim 12 (New) A method of claim 1, wherein said sequence database comprises
nucleotide or protein sequence information that is converted into molecular weight information.

Claim 13 (New) A method of identifying one or more unknown microorganisms in a
sample comprising:
searching a database for a plurality of intact, undigested proteins that are predicted to
have the molecular weights of proteins in a mass spectrum of a sample, whereby said one or
more unknown microorganisms are identified,
wherein said sample comprises a plurality of proteins from one or more unknown
microorganisms, and said database is searched for more than one different protein, and

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wherein said database comprises molecular weight information deduced from nucleotide or protein sequence information obtained from genomic sequencing of known microorganisms.

Claim 14 (New) A method of claim 1, wherein the database searching consists of searching a database for a plurality of intact, undigested proteins.

Claim 16 (New) A method of claim 13, wherein the database searching consists of searching a database for a plurality of intact, undigested proteins.